Syllabus

COURSE TITLE: PHYS20401, General Physics, Section 01

I. Contact Information

Instructor: Dr. John F. Anderson
Class Room: Airway 134
Class Time Section 1: 10:00 – 10:50 MWF
Email: janderson@ulm.edu
Office Phone: #1941
Office: Hanna 143B
Office Hours:

MF	8:00 AM to 9:00 AM
MWThF	1:00PM to 3:00PM

II. Course Prerequisites/Corequisites

Prerequisite: PHYS 203

III. Course Description

Principles of electricity, magnetism, and light.

IV. Course Objectives and Outcomes

This objective of this course is to familiarize the student with electrostatics, magnetics, circuits, electromagnetic waves, selected topics in light, nuclear physics, and radioactivity in a mathematically rigorous manner.

V. Course Topics

Topics to be covered; Electric Charges and Electric Fields, Electric Potential, Electric Circuits, DC Circuits, Magnetism, Electromagnetic Induction and Faraday's Law, Electromagnetic Waves, selected topics of Light, Nuclear Physics, and Radioactivity.

VI. Instructional Methods and Activities

This course is a lecture course that is firmly grounded in the text. Interaction with the instructor during class is encouraged.

VII. Evaluation and Grade Assignment

There will be four in class tests and a comprehensive final exam.
Each in class test is for 100 points unless otherwise indicated during the test review.
The final exam is for 150 points unless otherwise indicated during the test review.
Cell phones in class are strictly forbidden during tests. It must be kept turned off and hidden away.
Laptops, blackberries, etc are also forbidden.
The test/final grading is as follows:
90 to 100% is an A
80 to 89% is a B.
70 to 79% is a C.
60% to 69% is a D.
Note: I don't normally award D's as a final grade.
Below 60% is an F.
The Instructor reserves the right to apply grading curves to the tests.
No tests are dropped.

VIII. Class Policies and Procedures

At a minimum, all policies stated in the current ULM Student Policy Manual & Organizational Handbook should be followed (see *http://www.ulm.edu/studentpolicy/*).
Additional class policies include:

A. Textbook(s) and Materials: Text Book: Physics, Sixth Edition, by Giancoli

B. Attendance Policy: The Department of Computer Science, Math, and Physics believes that classroom attendance is an essential component of this course. The excused absence and attendance rules are defined in the University Catalog and the Student Policy Paper. It is important that you attend class every period and arrive on time. Roll is taken at the beginning of each class period. If you arrive late, it is your responsibility to remind the instructor to mark you present. If you are absent from class due to an illness, you must bring me a valid copy (one that I can keep) of a doctor's excuse within 2 class periods after your return. If you are absent due to a school activity (i.e. band concert, swim meet, ULM 31, etc.), you must bring me an excuse (a schedule would be great!) from your coach, director, etc. within 2 class periods after your return. If you follow this procedure you will receive credit for class attendance on that day and the opportunity to make-up any material collected or tests missed. **Work is NOT a valid excuse!** Each student is responsible for all material and assignments covered in class whether or not the student is in attendance on that day.

C. **Make-up Policy:** You will have one week to make missed tests at the Instructor's discretion. Make up tests are only allowed with a valid excised absence.

D. **Academic Integrity:** Faculty and students must observe the ULM published policy on Academic Dishonesty (see Page 4 in ULM *Student Policy Manual* -- http://www.ulm.edu/studentpolicy/).

E. **Course Evaluation Policy:** At a minimum, students are expected to complete the on-line course evaluation.

F. **Student Services:** Information about ULM student services, such as Student Success Center (http://www.ulm.edu/cass/), Counseling Center (http://www.ulm.edu/counselingcenter/), Special Needs (http://www.ulm.edu/counselingcenter/special.htm), and Student Health Services, is available at the following Student Services web site *http://www.ulm.edu/studentaffairs/*.

G. **Emergency Procedures:** In case of emergency, contact your Dean.

H. **Discipline/Course Specific Policies:** Cell phones, blackberries, or ANY imaging or communication device is strictly prohibited during a test. All of these devices are to be turned of and hidden away. Communication and image capturing during a test is viewed as an academic infraction that will be referred to the Dean.

IX. Tentative Course Schedule

Schedule: *The instructor reserves the right to adjust the following schedule as needed.*

Course Goals:

Class Date	Chap-Section	Remarks
1/17 W	16-1 : 16-5	Coulomb's Law and Electric Fields in vector form.
1/19 F	16-5 : 16-6	
1/22 M	16-7 : 16-8	
1/24 W	16-8	
1/26 F	16-10	
1/29 M	Test Review	
1/31 W	17-1:17-2	Electric Potential. Dipoles, Dipole Moments, Capacitance, Electric Field Energy are also covered.
2/2 F	Test	Test on Chap 16. Five questions. Closed book, closed notes, no formula sheets.
2/5 M	17-4:17-6	
2/7 W	17-7:17-9	
2/9 F	18-1:18-3	
2/12 M	18-4:18-5;	
2/14 W	18-7;18-9	
2/16 F	19-1:19-2	DC Circuits
2/19 to 2/21	Mardi Gras	New Orleans
2/23 F	19-3;19-5	
2/26 M	19-6;20-1:20-2	Magnetism. Magnetic Dipoles, and Magnetic Dipole Moments, Torques.
2/28 W	Mid Term Exam Review; 20-3:20-7	
3/2 F	Mid Term Exam	Test is on Chap 17, 18, and 19. Five questions. Closed book, closed notes, no formula sheets.
3/5 M	20-8:20-9	
3/7 W	21-1:21-2	Chap 21 begins Faraday's Law and Induction. This is extremely important. It is grounding for Chap 22 Maxwell's Equations.
3/9 F	21-2	
3/12 M	21-3	
3/14 W	21-3	
3/16 F	21-4:21-6	
3/19 M	21-7;21-9:21-10;	
3/21 W	21-10;21-11;21-12;	Final Drop Date to withdraw with a "W"
3/23 F	21-13;21-14	
3/26 M	Chap 22	Maxwell's Equations. The most important chapter in this course.
3/28 W	Chap 22	
3/30 F	Test Full Period	Test on Chap 20 and 21
4/2 M	Chap 22	Spring break
4/4 W		
4/6 to 4/13	Spring Break	
4/16 M	Chap 30	
4/18 W	Chap 30	
4/20 F	Chap 30	
4/23 M	Chap 31	
4/25 W	Chap31	

4/27 F	Chap31 Test Review	
4/30 M	Chap23	Optics
5/2 W	Chap 24	Light
5/4 F	Test	Test on Chap 30 and 31.
12/7 Thursday 8:00 AM to 9:50 AM	**Final Exam**	**Final Exam covers new material since last test and problems from previous in-class tests.**

Problems for PHYS 204-01

Chapter	Assigned Problems, Questions, and Examples	Remarks
Chapter 16	Examples:1,3,4,7,8,9,11,12	
	Questions: 17	
	Problems:10,11,13,29,35,39,44,49	
Chapter17	Examples: 1,2,4,5,6,8,11,12	
	Questions: None	
	Problems: 13,17,18,27,30,44,50,51	
Chapter 18	Examples: 7, 8, 10	
	Questions: 4, 7, 9, 12, 13,	
	Problems: 9, 12, 13, 14, 15, 18, 34, 40, 46,	Problem set may be adjusted as required.
Chapter 19	Examples: 1, 4, 7, 8, 10, 11, 12	
	Questions; None	
	Problems: 13, 17, 19, 20, 22, 37, 41, 50.	
Chapter 20	Examples: 1, 4, 5, 7, 8, 10	
	Questions: None	
	Problems: 4, 5, 8, 9, 11, 12, 14, 19, 35, 37, 38, 41, 58, 79.	
Chapter 21	Examples: 5, 8,	Problems, Examples, and Questions for Chapter 21 will be decided at the beginning of the chapter during class.
	Questions: 4	
	Problems: 6, 8, 9	
Chapter 22	Examples: 1, 2, 3, 4, 5,	
	Questions: None	
	Problems: 1, 2, 44, 46, 50, 51, 52	
Chapter 23	Examples: 2, 3, 6, 7	
	Questions: None	
	Problems: 6, 9, 23, 24, 25, 30, 31, 32, 37, 40	
Chapter 24	Examples: 1, 3, 4, 6, 7, 8, 10, 11, 12, 13.	
	Questions: None	
	Problems: 55, 66	Additional problems to be assigned.
Chapter 30	Examples: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11,	
	Questions: 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 19, 20.	
Chap 31	Examples: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12,	